AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-2. (Canceled)

3. (Currently Amended) A data transmitting element (DTE) to be used for sending data, over a link through a first communications network, towards a data receiving element (DRE) for communication of said data over a second communications network, said DTE comprising:

data sending means (DSM), adapted to send said data towards said DRE;

service level requesting means for generating an Internet Protocol Control Protocol (IPCP) message, for sending to said DRE, requesting a service level for communicating said data of said DTE over said second communications network; and

service level proposal receiving means:

adapted to receive from said DRE an IPCP message indicating a proposed service level that said DRE can provide for communicating said data of said DTE over said second communications network, and

notifying said DSM of said received service level proposal,

wherein said DRE receives said data of the DTE over said first communications network and transmits said received data of the DTE in said second communications network.

4. (Previously Presented) The DTE according to claim 3, further comprising service level proposal renegotiating means, coupled between an output terminal of said service level proposal receiving means and an input terminal of said service level requesting means, for generating another IPCP message requesting a service level, different from the proposed service level indicated in said IPCP message from said DRE, in response to an indication that said proposed service level is not a satisfying service level.

5. (Currently Amended) A data receiving element (DRE), to be used for receiving data from a data transmitting element (DTE), over a link through a first communications network, and communicating said data over a second communications network, said DRE comprising:

data receiving means (DRM), adapted to receive said data from said DTE;

service level request reception means for receiving an Internet Protocol Control Protocol (IPCP) message, from said DTE in said first communications network, said message indicates~~ing~~ a requested service level for said communicating of said data of said DTE over said second communications network;

service level negotiating and proposing means, coupled with said service level request reception means, for determining a service level that said DRE can provide for communicating said data of said DTE within said second communications network, based on at least one predetermined criterion and on said requested service level, and formulating, as a service level proposal, an IPCP message indicating said determined service level; and

service level proposal sending means, coupled with said service level negotiating and proposing means, for sending said IPCP message as said service level proposal.

6. (Currently Amended) A data receiving element (DRE), to be used for receiving data from a data transmitting element (DTE), over a link through a first communications network, and communicating said data over a second communications network, said DRE comprising:

data receiving means (DRM), adapted to receive said data from said DTE in said first communications network;

service level negotiating and proposing means, for determining a service level that said DRE can provide for communicating said data of said DTE within said second communications network, based on at least one predetermined criterion and on said requested service level, and formulating, as a service level proposal, an IPCP message indicating said determined service level; and

service level proposal sending means, coupled with said service level negotiating and proposing means, for sending said IPCP message as said service level proposal.

7. (Currently Amended) A software module for running on a processing system for inclusion in a data transmitting element (DTE), for sending data, over a link through a first communications network, towards a data receiving element (DRE) for communication of said data over a second communications network, said software module comprising:

a data sending sub-module, adapted to send said data towards said DRE;

a service level requesting sub-module, for generating an Internet Protocol Control Protocol (IPCP) message, for sending to said DRE, requesting a service level for communicating said data of said DTE over said second communications network; and

a service level proposal receiving sub-module:

adapted to receive from said DRE an IPCP message indicating a proposed service level that said DRE can provide for communicating said data of said DTE over said second communications network, and

notifying said data sending sub-module of said received service level proposal,

wherein said DRE receives said data of the DTE over said first communications network and transmits said received data of the DTE in said second communications networks.

8. (Currently Amended) A software module for running on a processing system for inclusion in a data transmitting element (DTE), for sending data, over a link through a first

communications network, towards a data receiving element (DRE) for communication of said data over a second communications network, said software module comprising:

a data sending sub-module, adapted to send said data towards said DRE;

a service level requesting sub-module, for generating an Internet Protocol Control Protocol (IPCP) message, for sending to said DRE, requesting a service level for communicating said data of said DTE over said second communications network; and

a service level proposal receiving sub-module:

adapted to receive from said DRE an IPCP message indicating a proposed service level that said DRE can provide for communicating said data of said DTE over said second communications network, and

notifying said data sending sub-module of said service level proposal;

~~The software module according to claim 7, further comprising~~ a service level proposal renegotiating sub-module for checking whether the received service level proposal is satisfactory and for instructing said service level requesting sub-module to generate another service level request in an IPCP message with a different proposed service level, when the received service level proposal is found unsatisfactory.

9. (Currently Amended) A software module for running on a processing system for inclusion in a data receiving element (DRE), for receiving data from a data transmitting element

(DTE), over a link through a first communications network, and communicating said data over a second communications network, said software module comprising:

a data receiving sub-module, adapted to receive said data from said DTE;

a service level request reception sub-module, for receiving an Internet Protocol Control Protocol (IPCP) message, from said DTE in said first communications network, said message indicates~~ing~~ a requested service level for said communicating of said data of said DTE over said second communications network;

a service level negotiating and proposing sub-module, co-operating with said service level request reception sub-module, for determining a service level that said DRE can provide for communicating said data of said DTE within said second communications network, based on at least one predetermined criterion and on said requested service level, and formulating, as a service level proposal, an IPCP message indicating said determined service level; and

a service level proposal sending sub-module, co-operating with said service level negotiating and proposing sub-module, for sending said IPCP message as said service level proposal.

10. (Currently Amended) A software module for running on a processing system for inclusion in a data receiving element (DRE), for receiving data from a data transmitting element (DTE), over a link through a first communications network, and communicating said data over a second communications network, said software module comprising:

a data receiving sub-module, adapted to receive said data from said DTE in said first communications network;

a service level negotiating and proposing sub-module, for determining a service level that said DRE can provide for communicating said data of said DTE within said second communications network, based on at least one predetermined criterion and on said requested service level, and formulating, as a service level proposal, an IPCP message indicating said determined service level; and

a service level proposal sending sub-module, co-operating with said service level negotiating and proposing sub-module, for sending said IPCP message as said service level proposal.

11. (Previously Presented) A method for data communication, comprising:

setting a level of service for a data transmitting network element (DTE), said DTE being connected to a data receiving network element (DRE) via a point-to-point connection of a first communications network, said DRE being connected to a second communications network, said level of service relating to transporting data between said DTE and said second communications network via said DRE, wherein said level of service is set by:

determining, at said DRE, a service level that said DRE can provide for communicating said data of said DTE with said second communications network, based on at least one predetermined criterion;

formulating, at said DRE, an Internet Protocol Control Protocol proposal indicating said determined service level;

sending said Internet Protocol Control Protocol proposal to said DTE; and

receiving said Internet Protocol Control Protocol proposal at said DTE; and then

transporting said data between said DTE and said second communications network via said DRE according to said level of service indicated in said Internet Protocol Control Protocol proposal.

12. (Previously Presented) The method for data communication as set forth in claim 11, further comprising:

before said determining of said service level at said DRE:

sending, from said DTE to said DRE, an Internet Protocol Control Protocol request indicating a requested level of service; and

receiving at said DRE said Internet Protocol Control Protocol service level request sent from said DTE;

wherein said determining of said service level at said DRE is based also on said requested level of service of said DTE.

13. (New) The DTE according to claim 1, wherein said DTE is a user terminal and said DRE is an edge element of said second network.

14. (New) The DTE according to claim 13, wherein said DRE is an access server provider and said second network is an internet network.

15. (New) The DTE according to claim 1, said DTE further comprises a service level proposal renegotiating means for checking whether the service level proposal received from the DRE is satisfactory and when the service level is unsatisfactory, the service level requesting means generates a new IPCP message for sending to the DRE.

16. (New) The DTE according to claim 1, further comprising generating means for generating data for transmission wherein the DTE is an element creating said data for transmission.